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The delivery of health care in the United States is undergoing dramatic change. This is especially true for the nation's academic health centers (AHCs). The proliferation of managed care, coupled with the decline of federal subsidies is forcing AHCs to develop new avenues in which to generate revenues. International patients represent one such opportunity because they are not typically affected by the constraints of managed care. These patients represent an opportunity for hospitals to receive full reimbursement for medical care rendered.

The purpose of this research was to determine the impact of international patients on the Johns Hopkins University School of Medicine (SoM). This was accomplished by performing a financial analysis of the Johns Hopkins Hospital International Services Department. Specifically, four areas were examined; profitability, revenues, collection rates, and the aging of accounts receivables. The results were overwhelming. The research showed that significant financial benefits are derived from international patients. In addition, the study provides recommendations concerning how the Johns Hopkins Hospital International Services Department can further improve its management of accounts receivables.

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U.S. Army - Baylor University Graduate Program in Health Care Administration

Graduate Management Project:

A Study of the Impact of International Patients on the Johns Hopkins University School of Medicine

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2 February, 1999

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Abstract

The delivery of health care in the United States is undergoing dramatic change. This is especially true for the nation's academic health centers (AHCs). The proliferation of managed care, coupled with the decline of federal subsidies is forcing AHCs to develop new avenues in which to generate revenues. International patients represent one such opportunity because they are not typically affected by the constraints of managed care. These patients represent an opportunity for hospitals to receive full reimbursement for medical care rendered.

The purpose of this research was to determine the impact of international patients on the Johns Hopkins University School of Medicine (SoM). This was accomplished by performing a financial analysis of the Johns Hopkins Hospital International Services Department. Specifically, four areas were examined; profitability, revenues, collection rates, and the aging of accounts receivables. The results were overwhelming. The research showed that significant financial benefits are derived from international patients. In addition, the study provides recommendations concerning how the Johns Hopkins Hospital International Services Department can further improve its management of accounts receivables.

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Introduction

The delivery of health care in the United States is a complex, dynamic process driven by extreme levels of competition. In an era of increased financial responsibility, increased market competition, information asymmetry, and market uncertainty, the quest for limited resources is prompting dramatic change. This is especially true in the nation's academic health centers (AHCs). Although health care suppliers once controlled the delivery of health care, those days are long gone. Managed care, capitated financing mechanisms, Medicare/Medicaid reimbursement, and the globalization of the economy have changed the health care industry from a supply-side economic model to a demand-driven model. Increasingly, health care organizations are being forced to redefine their business strategies in order to survive.

The roles of AHCs are rapidly changing along the lines of financing and the delivery of health care. AHCs have long symbolized a commitment towards providing world class medical care, leading edge research, and graduate medical education. The AHCs academic mission of providing care for vulnerable populations, conducting biomedical research, and training future health care professionals sets them apart from other private institutions. Unfortunately, aggressive competition and economic constraints are placing this mission at risk.

AHCs have enjoyed robust federal subsidies and other cross-subsidies that have allowed them to accomplish their mission

despite declining revenues from other sources (Blumenthal and Meyer, 1996). However, nationwide cost containment initiatives such as the Prospective Payment System, and the proliferation of managed care, are forcing AHCs to compete with private hospitals based on cost and quality. According to Solit and Nash (1996), "this may leave little support for less profitable activities." For these reasons, AHCs must develop new avenues for financing non-profitable activities such as providing indigent care. One such avenue is the development and capitalization of international patients, who are predominately self-pay or foreign embassy sponsored. International patients represent a tremendous opportunity to improve an AHCs' financial position, through increased revenue streams and higher than average profit margins.

Problem Statement

As AHCs continue to be threatened by the erosion of both government and commercial reimbursement, opportunities exist to capitalize on other financing ventures. One such opportunity is capturing the international patient market. Terence Cunningham, the Johns Hopkins Hospital (JHH) Vice President of Administration, believes that international business revenues at Johns Hopkins could eventually hit $100 million. However, in order to improve the Johns Hopkins international market position, organization-wide support must be garnered. A key to this success is gaining the backing of the Johns Hopkins University School of Medicine (SoM). This study will determine the impact

of international patients on the SoM, in addition to providing recommendations for further improvement.

Conditions which Prompted the Study

One of the keys to ensuring the financial viability of international patient business is gaining the full support of the SoM. Currently, there is a misperception that international patients exhibit a substandard collection rate of accounts receivables. This misperception has been perpetuated because in the past there was no means of disproving it. This was primarily due to a lack of adequately robust information systems.

Fortunately, in recent months, significant improvements in information systems and financial reporting mechanisms have allowed the JHH International Services Department to accurately identify the financial benefits of international patients. The availability of this new information, and the need to rectify the misperception that international patients have poor collection rates prompted this study.

The JHH International Services Department was established with the mission to promote international business growth, while maximizing international collections of professional fees and hospital charges. Since its inception, International Services has experienced tremendous growth. This growth has occurred in the number of international patients, inpatient admissions, and gross revenues, as well as staffing increases (see Appendix A). Unfortunately, this rapid, uncontrolled growth has led to an

inability for International Services to accurately determine its revenues and expenses.

In the past, International Services has been unable to accurately identify the impact of international patients on the SoM. In this era of finite resources and limited capacity, International Services is under close scrutiny to prove the financial benefit of providing health care to international patients. The purpose of this project is to determine the extent of these benefits, as well as to accurately identify how the International Services Department is impacting the SoM.

Literature Review

An extensive literature search yielded specific information regarding how U.S health care organizations are targeting the international patient market. This literature review examines the challenges and opportunities in the international patient market. The review was conducted by researching international health care business opportunities, the financial impact of international patients, as well as by examining the myriad of challenges facing AHCs. It is important to note that little empirical data has been published regarding how international patients affect U.S. hospitals. This is primarily due to hospitals considering this information as proprietary and critical to their success.

Finding untapped health care markets with the potential to produce high profits within the confines of the United States is

becoming increasingly difficult. According to the Health Care Financing Administration (HCFA), health care costs are expected to escalate after several steady years. HCFA analysts predict the nation's total spending on health care will double over the next decade reaching $2.1 trillion by the year 2007. This equates to 16.6 percent of the gross national product as compared to 13.3 percent in 1996 (The Baltimore Sun, 1998). The report states that 85 percent of Americans are enrolled in managed care plans, and that there is little possibility of further savings. The HCFA report indicates that there is little profit margin left in the domestic health care market. In an article by Moore (1997), Jan Blomefield states, "Managed care has decreased revenues to facilities so drastically that institutions are looking for infusions of cash."

The proliferation of managed care in addition to the decreases in government payments for health services, has led to sweeping changes in the American health care landscape. According to Freudenheim, (1996a), these changes have contributed to American hospitals' new "foreign policy." The Health Care Advisory Board (HCAB) reports that opportunities abound in the international services arena. One such area is U.S. health care organizations developing relationships with foreign providers. These relationships generate patient referrals, and promote future expansion into foreign markets (HCAB, 1996a).

McLean (1997) states that the fundamental changes in domestic health care delivery in the 1990s have prompted many health care organizations to consider entering international markets. One such opportunity is obtaining referrals and consultations from entities outside of the United States. In addition to referrals of wealthy self-pay patients, opportunities exist for U.S. health care organizations to forge agreements with private foreign entities and governments. The delivery of international health services has given U.S. health organizations the opportunity to develop new sources of patients and revenues. By establishing international referral networks, domestic health care organizations can provide services to non-U.S. residents. Furthermore, McLean (1997) indicates that many teaching hospitals market tertiary care services internationally.

AHCs are also feeling the effects of shrinking profit margins within the U.S. health care sector. According to Blumenthal and Meyer (1996), the central problem facing AHCs is how to restructure their revenue sources. AHCs produce two types of goods: public and private. Public goods are products and services in which society places value, but for which there is no private market. These goods include the health care provided to vulnerable populations. AHCs support these endeavors through government subsidies, and from the excess revenues produced from the sale of private goods. Private goods consist of the products and services in the areas of clinical care, teaching, and

research that ACHs sell to paying customers. One pertinent example of private goods is the clinical services provided to international customers.

A November 1998 Ernst and Young brief entitled, "Emerging Markets: An Exploration of International and Domestic Trends and Opportunities in Health Care" was tasked to explore the emerging economic trends which will shape international health care opportunities. In addition, Ernst and Young were tasked to provide insight regarding how major industry players are responding to these opportunities. The brief identified several global trends such as: population growth and aging creating increased demand for health care; increased health care privatization; consumers demanding better quality and access; and an international appreciation for U.S. scientific, medical, and technology research and development. Ernst and Young state that these global trends lead to opportunities to gain revenues from overseas services, promote name recognition and image, build market position, and to increase international patient volume.

A 1994 article by Health Line entitled, "Niche Marketing: Providing Services to Foreigners" indicates that the stiff competition in the American medical establishment is leading hospitals to target foreign nationals as a new revenue source. Blumenthal and Meyer (1996) state that due to the proliferation of managed care and health care price competition, profit margins are being driven down in the private goods arena. This issue

coupled with reductions in government subsidies for public health care goods and services are placing AHCs in dire straits. Without sufficient excess revenues created from the sale of private goods, or adequate government reimbursement for public goods and services produced, AHCs must develop new sources of funding. The challenge to AHCs is to find new ways to increase net revenues from the goods they sell to paying customers. Zinn, Kashlak, and Balotsky (1994) state, "As growth potential in the domestic market declines and regulatory constraints increase, U.S. proprietary and nonprofit hospitals...look to international opportunities for supplementing diminishing revenues."

One such opportunity is to increase the sale of clinical services to private purchasers of health care such as international patients. An article by Boodman (1998) entitled, "Hospitals go Deluxe" states that contrary to domestic patients covered by managed care organizations, which require discounts from participating hospitals and physicians, self-pay international patients tend to "pay in full, in cash, and upfront." This statement is supported by an interview with Dr. Amr Elrifai who states, "In a managed care environment, international business becomes the only remaining market where you will get percentage-wise more on a reimbursement basis" (Strohl, 1997).

Currently, very little quantitative data has been published concerning the profitability of international patients.

This is primarily due to the majority of hospitals that pursue international patients as part of their strategic plan considering this information as proprietary and critical to their success. Hospitals guard their international efforts very closely and consider it confidential. This statement is supported by the attempts of two private consultants (Ernst and Young LLP, and KPMG Peat Marwick LLP) who were hired by Johns Hopkins to research how international patients are affecting the U.S. health care industry. At best, the results were moderately successful. The literature reviewed identified general industry trends, but seldom revealed specific numbers.

The 1994 U.S. Industrial Outlook, Health and Medical Services review of the international health care market revealed that world wide health care spending amounted to an estimated $1,700 billion or eight percent of the world's income in 1990. Forty percent of the of the global spending on health care was attributable to the United States, leaving $1,020 billion in spending throughout the rest of the world. The review states that the business climate in many countries appears favorable to U.S. health care companies expanding operations. This is primarily due to the governments of many nations making health care a centerpiece of their social policy, as well as steady budget increases for health care. Although no specific values were given, the health care industry outlook indicated that the

treatment of foreign patients contributed to a services surplus in the U.S. balance of payments.

The U.S. Industry and Trade Outlook 1998: Health and Medical Services identifies several global trends. One such trend is health care companies expanding beyond their borders to provide services in foreign markets. In addition, national movements in many foreign countries to privatize health care delivery should act as a catalyst for future export opportunities. Growth projections over the next one to five years are very positive. The report states that U.S. health care companies should continue to expand their markets internationally. Revenues for medical services expanded by an estimated 5.9 percent in 1995 and 6.4 percent in 1996. This is the result of intensified efforts by U.S. health care organizations to seek out foreign patients. The estimated growth in 1997 is 5.3 percent or nearly $1 billion. Between 1998 and 2002, exports should grow by an estimated 6 to 7 percent annually. However, caution should be used when examining these growth rates. This is because calculating the values of exports of U.S. health care services involves the same difficulties encountered when trying to measure other service industries. In 1995, it is estimated that U.S. health care organizations provided $841 million in medical services to international patients. In addition, estimates indicate that foreign travel to the United States for treatment results in tens of thousands of medical visits each year.

Opportunities abound for providing health care to international patients at the host country's facility. One such example is Argentina whose out-of-country payments for health services are estimated to be $60 million annually. Another opportunity exists in intensifying efforts to treat Mexican patients in the United States. It is estimated that 425,000 Mexicans could afford to pay for medical treatment in the United States (U.S. Industry and Trade Outlook, 1998).

A November 1998 KPMG Peat Marwick brief accomplished a price sensitivity analysis of U.S medical centers international services. Thirty DRGs were researched using the comparative HCIA database. Select hospitals from eight states were used. Unfortunately, this analysis was only of moderate value because it excluded many of Johns Hopkins competitors. Data from these direct competitors was not available. Overall, when compared to other medical centers, the JHH hospital charged an average of 11.9% less per day than its competitors. The price sensitivity analysis indicated that Johns Hopkins could increase their prices on select DRGs without pricing themselves out of the market.

The opportunity to collect higher levels of reimbursement for international patients versus domestic patients is evident throughout the literature. A 1997 publication entitled "Developing and Implementing International Patient Programs" estimates that international patients spend up to 44 percent more than the average American on complex medical procedures including

cancer treatment, congenital malformations, cosmetic surgery, heart surgery, neurosurgery, and organ transplants (HCAB, 1998b). An article entitled, "Se Habla Foreign Patient Revenue? Hospital Specializes in Foreign Patients," states that the economics of foreign patients are irresistible. The article indicates that international patients may pay up to 400 percent more for a radical prostatectomy. In terms of higher profits, a foreign patient is charged $13,000 to $17,000 for a radical prostatectomy for a five-day stay, as compared to an HMO or Medicare patient who is charged approximately $3,500 (Moore, 1997).

Another article identifies a definite trend in the U.S. health care industry in which hospitals and clinics are targeting the international market for patients with the financial means to pay for medical care. According to Dr. Muni Reddi, "All over the country, people are looking for international patients, partly to increase their business and get full reimbursement for providing medical care." Furthermore, the article identifies the economic incentives present in providing service to international patients. Specifically, the author states that in addition to paying top dollar for health care procedures, international patients also fill empty beds (Sneider, 1998).

This sentiment is echoed in a 1996 Medical Industry Today report which states that U.S. Hospitals have been driven by the pressure of managed care and empty beds to seek the business of wealthy patients around the globe. One of the primary reasons

U.S. hospitals have the capability to attract wealthy foreigners, is due to the caliber of U.S. medical care. Although the exact numbers are not tracked, hospitals believe the total number of visits by foreign patients is already tens of thousands, and could grow exponentially. Latin America, the Pacific Rim, India, and the Persian Gulf are especially inviting markets for U.S. hospitals (Medical Industry Today, 1996).

According to Dow Jones reports, the push to attract foreign patients has hospitals soliciting patients from areas of violence and warfare. For example, Johns Hopkins negotiated a contract to treat patients involved in the border war between Ecuador and Peru. Johns Hopkins persuaded the Ecuadorian government to send 45 patients to the hospital for prosthetics resulting in about $35,000 per casualty. According to John Hutchins, the director of International Services at the Johns Hopkins Hospital, "Casualty patients are a new and enriching market niche" (Medical Industry Today, 1996).

An article by Freudenheim (1996b) entitled, "Hospitals Looking Abroad to Keep Their Beds Filled," indicates that hospitals are looking abroad because of the changes sweeping through the U.S. health care environment. International patients represent an opportunity to improve a hospital's profit margin. Freudenheim's article indicates that in the Houston hospital market, the profit margin for foreign patients averages 25 percent to 30 percent, as opposed to an overall 8 percent profit

margin for domestic patients. In addition, the article states that, "While New England Medical averages $8,000 per case for an American patient, the average for a foreign patient, who usually comes for a much more complex treatment and without limitation imposed by managed care plans, is reportedly $20,000 to $30,000." This is just one example of international patients representing a financial windfall for U.S. health care organizations. According to an article by Healthcare and Marketing News (1996), "Hospitals around the world are pushing out their borders looking for new global patients." In an interview with Margory Huge, the Washington Hospital Center communications director, "Foreign patients pay in cash - it is very lucrative."

According to an HCAB report (1998b), the disparity between domestic and international reimbursement is significant. The substantial revenues generated by international patients and the percentage of total hospital revenues are identified in Table 1.

Table 1. International Patient Revenues

International Patient Revenues

Hospital	International Revenues	Percentage of Total Hospital Revenues	Year of Data
Baptist Hospital Miami, Florida	$8.4 Million	4	1995[A]
Cleveland Clinic Cleveland, Ohio	$70 Million	4	1994[A]
Detroit Medical Center Detroit, Michigan	$1.7 Million	0.2	1993[A]
Johns Hopkins Hospital Baltimore, Maryland	$29 Million	5	1997[B]
Stanford University Medical Center San Francisco, California	N/A	1	1996[C]

[A] *Source*: HCAB analysis
[B] *Source*: "S&P Afms Maryland Hlth and Hghr Ed/Johns Hopkins Hosp Bds." *Business Wire*. (June 18, 1998).
[C] *Source*: Bole, K. "World's Ill Seek Expertise of Bay Area Docs." *San Francisco Business Times*. (July 11, 1997).

Source: HCAB (1998b)

This table is supported by an article by Bell (1996) which suggests that international patients have the potential to become cash cows. The article explains that international patients may generate a disproportionate amount of income for hospitals. For example, international patients who receive care at the St. Luke's Episcopal/Texas Heart Institute only generate five percent of the inpatient volume; however, they produce nine percent of the total revenues and profit margins of 25 percent per patient. This article shows how significantly international patients can affect U.S. hospitals.

However, before health care organizations decide to pursue international patients, they must first weigh the risks and benefits of entering the market. Despite the potential revenues, high profit margins, and infusion of cash from international patients, there are a number of risks associated with international patients. According to McLean (1997), the risks hospitals may face include problems with reimbursement, cash flow, currency-related problems, regulation, and politics.

In addition to these potential problems, the HCAB brief (1998a) warns that hospitals instituting international service programs may have trouble obtaining support from employees. The HCAB suggests that an educational process accompany financial investments for international patients. This is necessary because many staff members do not understand why hospital management would choose to invest funds for international

patients over domestic patients. It should be communicated that the significant revenues generated by international paying patients help to fund charity care for domestic patients.

As mentioned earlier, another shortcoming associated with dealing with international patients is the difficulty associated with collecting reimbursements from foreign patients. One way to eliminate the risk is to require advance fee-for-service payments. Two hospitals contacted by the HCAB (1998b) stated that they required foreign patients to pay for treatment prior to receiving service. Acceptable methods of payment include bank transfers, checks, cash, irrevocable letters of credit, and money orders. The bottom line is that despite the complications associated with collecting reimbursement from international patients, embassies, or foreign insurance companies, research indicates that the financial benefits generated by foreign patient programs outweigh the risks associated with them.

Purpose Statement

The purpose of this study is to determine the impact of international patients on the SoM. The goals of this study are twofold. The primary goal is to determine how international patients affect the SoM. The secondary goal of this study is to provide recommendations to the International Services Department regarding how they can improve their receivables management to better maximize international patient revenues.

Method and Procedures

To determine the impact of international patients on the SoM, an in-depth financial analysis was accomplished. This methodology was chosen because the data available lent itself to a rigorous financial analysis. Specifically, four financial areas were studied during the analysis; (a) profitability, (b) revenues, (c) collection rates, and (d) the aging of accounts receivables. Finally, after the financial analysis was completed, recommendations were made regarding how International Services could improve their receivables management to better maximize the recovery of international patient revenues.

The purpose of the analysis was to assess the financial strengths and weaknesses of providing health care services to international patients. An accurate assessment of International Services financial condition aided in determining the financial viability of continuing to pursue international patients. The primary goal of the financial analysis was to evaluate whether or not International Services financial situation was improving, holding constant, or deteriorating (Gapenski, 1996). Success was measured by comparing international patient financial data to historical data, SoM domestic data, and industry benchmarks. These comparisons allowed the effectiveness, efficiency, and impact of International Services to be accurately assessed.

In order to gain a perspective of the magnitude in which international patients impact the SoM, a profitability analysis

was accomplished. The profitability analysis was the first-step to necessary to determine the financial impact of international patients. Gapenski (1996) states that profitability may be the most important element in conducting a financial analysis. The analysis compared the SoM revenues and expenses attributable to international patients over the last four years. The profitability analysis allowed the net income and rate of return derived from international patients to be determined. In addition, the profitability analysis identified the cash flows generated from providing health care services to international patients. High profitability of international patients is critical because the primary reason for providing care to these patients is to subsidize the care Johns Hopkins provides to its vulnerable populations.

Next, international patient revenues were studied. Revenues were trended over a four-year period in order to determine growth. Studying the revenue growth of international patients is important because it is a key determinant of profitability. During this evaluation, international revenues and admissions were compared. This comparison determined the relationship between revenue growth and admissions. In addition, international revenue growth was also compared to SoM domestic patient revenue growth, and industry benchmarks.

To further evaluate the impact of international patients, their collection rates were examined. First, historical

collection rates were reviewed in order to determine collection trends. Next, the international collection rates were compared to the SoM collection rates for domestic patients. This analysis evaluated the differences between international and domestic patient collection rates. The examination of collection rates allowed a determination to be made regarding how successful International Services is in collecting the charges they bill their patients.

Finally, the aging of accounts receivables was researched. Evaluating accounts receivables is important because the hospital's receivables policy directly affects its cash flow. The focus of this analysis was to determine how International Services was managing their accounts receivables. The purpose of evaluating the accounts receivables policy was to determine if it was too restrictive, too lenient, or on target. In addition, corrective recommendations were provided.

Financial data were collected from a variety of automated information systems (AIS). Data sources included the MERIDIAN (international patient tracker) system, the IDX (professional fee charges and payments) system, and the KEANE (hospital inpatient and outpatient charges and payments) system. This information was then merged into Microsoft Excel spreadsheets in order to allow data analysis and trending.

In addition to the problems associated with merging data from multiple sources, another issue arose when studying JHH and

SoM data. This is due to the JHH and SoM using different accounting methodologies. The JHH uses an accrual methodology, whereas the SoM uses a cash-basis methodology. Simply stated, a cash-basis methodology compares an entire month's charges with an entire month's payments. Under this methodology, specific payments are not matched back to their specific charges.

Theoretically, under a cash-basis methodology, it is possible to achieve a collection rate in excess of 100 percent. The JHH accrual methodology, also known as 'matching', differs from cash-basis because payments are matched back to their specific charges, regardless of when the payment is received. For example, if a charge is billed in January, and payment is received in August, that payment is matched back to the January collection period. Therefore, the collection rate for January will increase, as opposed to August. Utilizing the same scenario, under a cash-basis methodology the August payment would be posted against August's collection rate.

Due to the use of these differing accounting methodologies, in the past it has been impossible to compare SoM data utilizing the JHH accrual methodology. However, as of August 1998, advances in AIS interfaces made it possible to obtain matched SoM data for the first time. Whenever possible, accrual data was used for the purpose of this study because it allows a more accurate and precise picture of International Services receivables management to be developed. However, a cash-basis

methodology was used for FY 95 and FY 96 comparisons because accrual data was not available for these fiscal years.

Results and Discussion

Specifically, four areas were examined in order to determine the impact of international patients on the SoM. These areas included; (a) profitability, (b) revenues, (c) collection rates, and (d) the aging of accounts receivables.

Profitability

In order to determine the financial impact of international patients on the SoM, a profitability analysis was conducted. The goal of this analysis was to compare the revenues generated by international patients with the expenses incurred by providing service to international patients. This comparison allowed both the net income and the rate of return to the SoM to be determined. The results are posted in Table 2.

Table 2. Profitability Analysis of International Patients

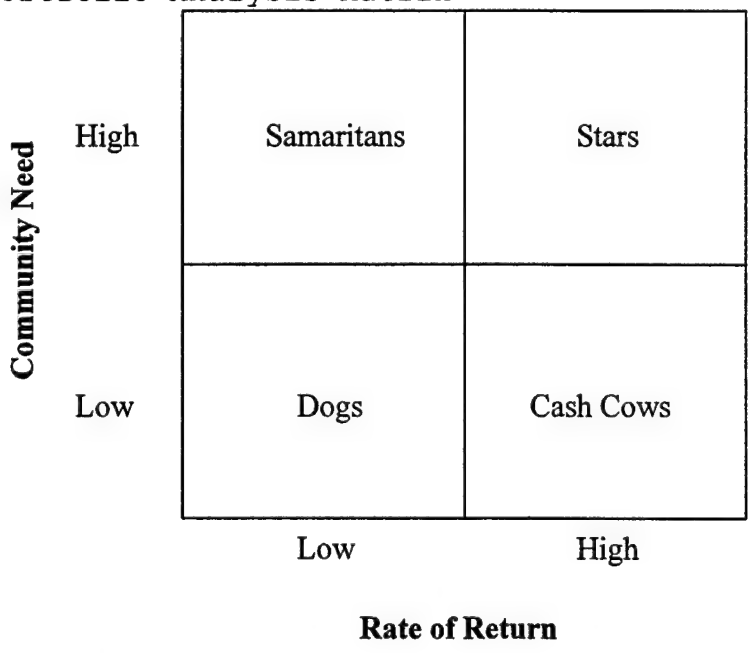
Income	FY 95	FY 96	FY 97	FY 98	Total
Revenue	$3,465,597	$6,110,249	$6,971,727	$10,014,177	$26,561,750
Expense	$284,120	$285,742	$684,365	$305,987	$1,560,214
Net Income (Loss)	$3,749,717	$6,395,991	$7,656,092	$10,320,164	$28,121,964
	Four Year Cumulative Net Income/ (Loss)		$28,121,964		
	Average Net Income		$7,030,491		
	Four Year Cumulative Return		1602%		
	Average Rate of Return		401%		
Expenses					
SOM Support*	$203,000	$203,000	$600,000	$220,000	$1,226,000
Salaries	$81,120	$82,742	$84,365	$85,987	$334,214
Net Expenses	$284,120	$285,742	$684,365	$305,987	$1,560,214

* SOM support to International Services based on joint agreements

This table identifies positive results. In the last four years, international patients have contributed a positive cash flow of $28.1 million to the SoM. This represents an annual rate of return of 401 percent, and a cumulative rate of return of 1602 percent. This analysis strongly supports the profitability of international patients. In addition, the rate of return for international patients well exceeds the minimum required rate of return of 30 percent established by the JHH.

The profitability of international patients was next considered in a modified Portfolio Analysis Matrix (Figure 1). This paradigm incorporates two dimensions rate of return, and community need. Rate of return is used as the measure of profitability. Community need is defined as supporting the needs of the JHH vulnerable population.

Figure 1. Portfolio Analysis Matrix



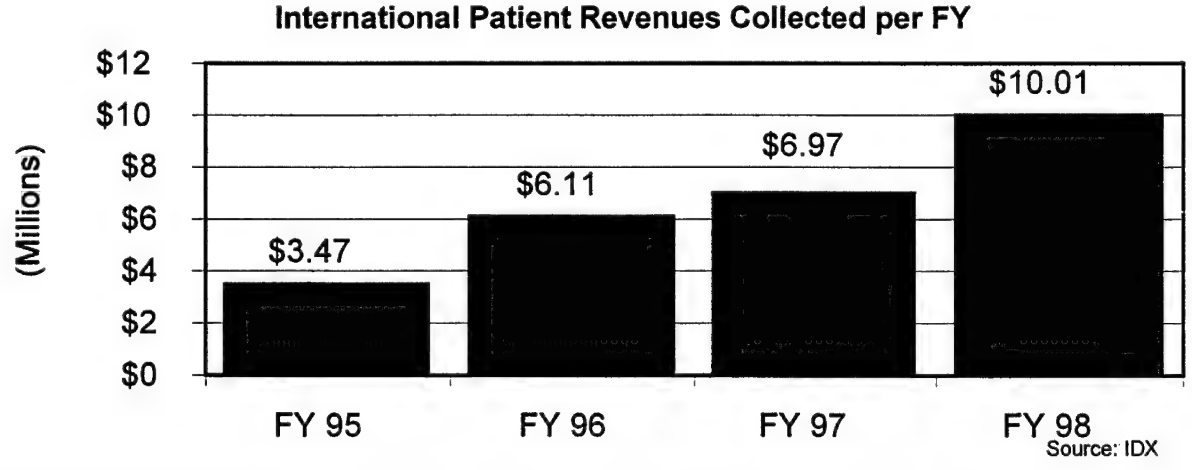
Adopted from W. Cleverly, Essentials of Health Care Finance (1986), Revised Portfolio Analysis Matrix

Because of the high rate of return international patients provide and the low community need they represent, international patients fall into the cash cow quadrant. International patients represent a large cash flow into the SoM. The profits derived from international patients, help to subsidize Samaritan programs such as drug abuse, which often produce small or negative rates of return. Next, the revenues attributable to international patients were studied.

Revenues

To examine the impact of international patients on the SoM's bottom line, patient revenues were evaluated. Using historical data, it was possible to develop an overview of the International Services financial situation. Due to information systems limitations, it was necessary to use a cash-basis methodology to compare the international revenues from FY 95 through FY 98. Figure 1 below shows the total annual revenues collected per fiscal year over the last four years.

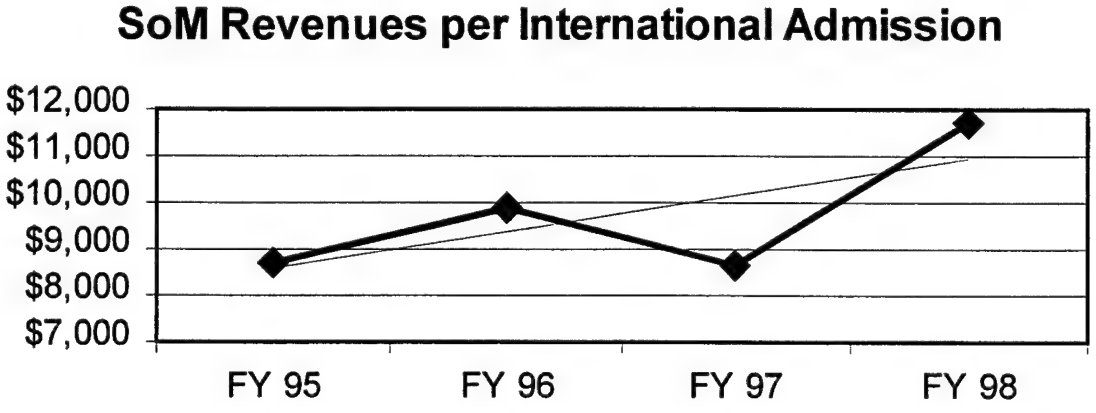
Figure 2. Total Annual SoM Revenues from International Patients using a Cash-Basis Methodology



The growth in revenues due to international patients over the last four years is apparent. Between FY 95 and FY 98, revenues increased 189 percent or nearly $2.2 million annually. In addition, a 44 percent increase was posted between FY 97 and FY 98. The cash-basis comparison of revenues identified a positive growth in revenues.

To more accurately evaluate revenue growth and in order to determine whether this growth was due to increased volume, increased pricing, or better collections, further examination is required. A benchmark was created comparing the revenues collected with the total number of international patient admissions over the same period. This allowed comparisons to be made between patient volumes and gross revenues. The results are shown in Figure 3.

Figure 3. SoM Revenues per International Admission using a Cash-Basis Methodology



Source: IDX and Meridian
Note: SoM revenues include inpatient and outpatient revenues

The comparison of revenues to the total number of admissions for the same period yielded positive results. An increase of

$3,000 in revenue per admission is shown during the period. International Services captured 25 percent more revenue per international admission in FY 98, than they did in either FY 95 or FY 97. This positive shift indicates that revenues are not only increasing due to increased volumes, but more importantly due to better collection efforts, and an improved pricing strategy.

Next, the relationship between the percentage of SoM revenues attributable to international patients, and the percentage of international patient hospital admissions were examined. As evidenced in Table 3 below, the results are very strong.

Table 3. Percent Comparison of International Patients Revenues and Hospital Admissions

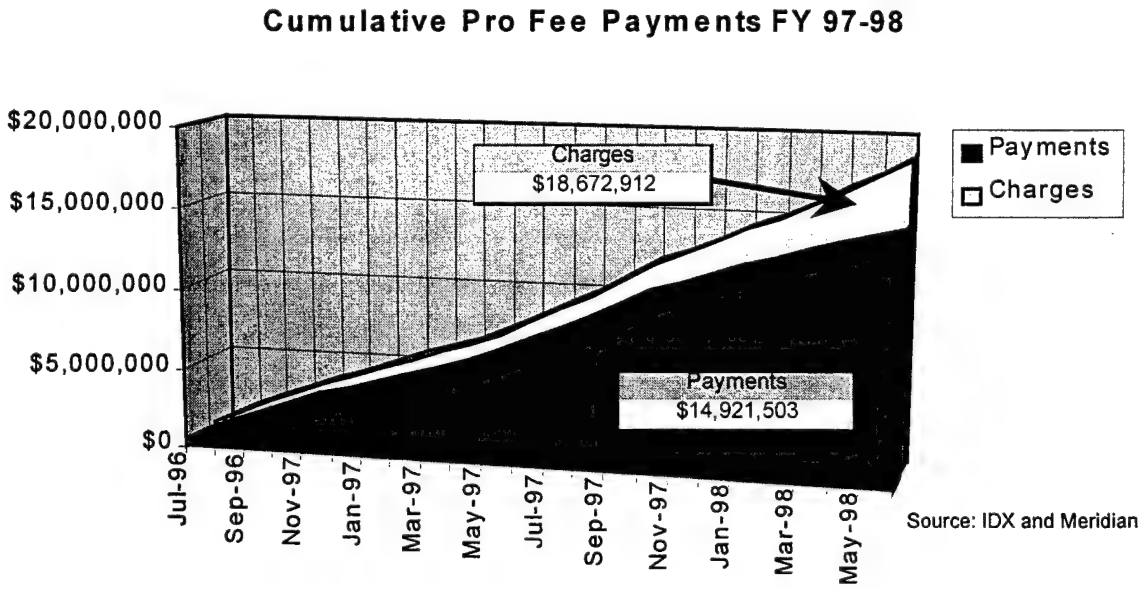
Comparison of International Patient Revenues to Hospital Admissions			
Fiscal Year	International Revenues	Percentage of Total SOM Revenues	Percentage of Hospital Admissions
FY 95	$3,465,597	4.95%	0.94%
FY 96	$6,110,249	9.65%	1.52%
FY 97	$6,971,727	12.67%	1.98%
FY 98	$10,014,177	19.55%	2.07%
TOTAL	$26,561,750	11.09%	1.62%

In the last four years, the percent of revenues attributable to international patients has increased nearly 15 percent. This increase is remarkable especially when the percentage of international hospital admissions is taken into account. The percent of hospital admissions only increased 1 percent over the same period. Table 3 indicates that although international patients constitute a small percentage of hospital admissions,

they account for a disproportionately large percentage of SoM revenues.

The accrual methodology was also used to evaluate FY 97-98 revenue data. Figure 4 illustrates the cumulative effects international patients have made on the SoM's bottom line.

Figure 4. Cumulative Effect of International Patients using an Accrual Methodology



In the past two years, international patients have accounted for $14.9 million in revenues for the SoM. Under an accrual methodology, as the FY 98 collection period continues to mature, FY 97-98 cumulative revenues for the SoM should approach $17 million (this value is expected based on achieving a 90 percent collection rate for FY 98 charges). A further examination of payments and charges yielded very interesting results. These results are identified in Table 4.

Table 4. FY 97-98 Comparison of SoM Charges and Payments

Total Charges		Accrued Payments		Average Monthly Payments	
FY 97	$8,168,552	FY 97	$7,618,930	FY 97	$608,548
FY 98	$10,504,360	FY 98	$7,302,573	FY 98	$634,911
Percentage Increase	29%	Cumulative Payments	$14,921,503	Monthly Increase	$26,363

In FY 98, there was a 29 percent increase in total charges as compared to FY 97. In addition, as indicated in the accrued payments section of Table 4, FY 98 payments are poised to surpass total collections for FY 97. These improvements can be attributed to several factors including; (a) increased international admissions, (b) increased pricing strategy, (c) improvements in billing practices, and (d) improved identification of international patients. These improvements are supported by increases in average monthly payments. When compared to FY 97, a $26,363 increase in payments per month has been posted in FY 98. This is further evidence that International Services revenues management is improving.

Next, a comparison of percent growth of revenues was conducted. The annual percent growth of SoM international patient revenues was compared to the Department of Commerce's revenue growth estimates for U.S. hospitals that provide health care services to international patients. In addition, SoM domestic patient revenue trends were compared to international revenue trends. The results are listed below in Table 5.

Table 5. Comparison of Percent Revenue Growth

Annual Percent Growth of International Patient Revenues			
Fiscal Year	SoM International Revenues	Estimated Industry Revenue Growth	SoM Domestic Revenues
FY 96	76.3%	6.4%	-14.0%
FY 97	14.1%	5.3%	-16.1%
FY 98	43.6%	6 to 7%	-14.2%

Estimated industry revenue growth based on U.S. Industry and Trade Outlook 1998. Health and Medical Services reports

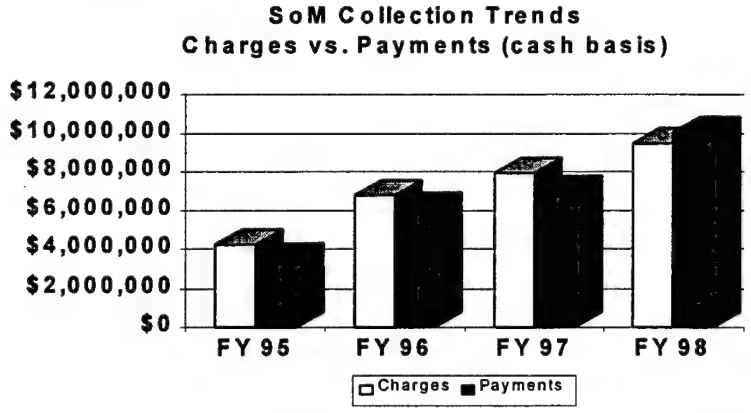
The comparison of revenue growth yielded positive results for International Services. The SoM international patient revenue growth significantly outperformed the estimated revenue growth rate published by the Department of Commerce. More significantly, while international patient revenues have been increasing at Johns Hopkins, the revenue growth for domestic patients has been negative. The analysis of revenues attributable to international patients reflects strong numbers and indicates that the SoM is positively benefiting from its international endeavors. International patient revenues are helping to offset the negative growth in the domestic market. This trend is validated in the literature review. Next, an examination of international collection efforts will be conducted.

Collection Rates

As indicated in the problem statement, there is a belief by the SoM that the collection rates for international patients are sub-standard. In fact, it is estimated that collection rates for international patients are as low as 60 percent. The following figures and resulting discussion directly refutes this

misperception. Figure 5 identifies collection trends for international patients using a cash-basis methodology.

Figure 5. Historical Collection Rates using a Cash-Basis Methodology



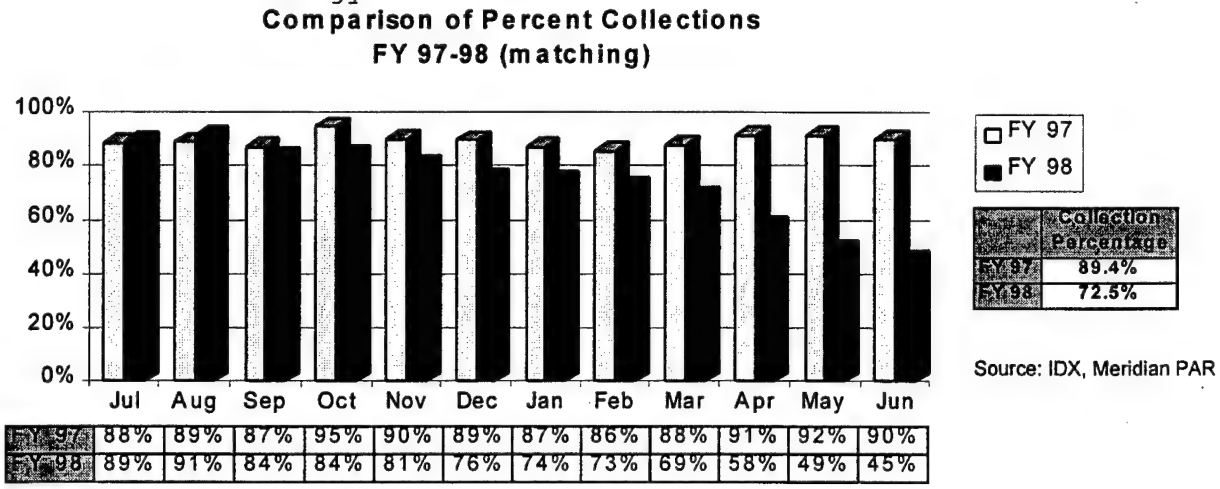
Year	% Collection
FY 95	82%
FY 96	90%
FY 97	88%
FY 98	106%

Source: IDX

As indicated in Figure 5, the historical collection rates for international patients are very strong. The cumulative four-year collection rate is 93.7 percent. During this period, $28.4 million was charged, and $26.6 million was collected. In addition, the cash-basis collection rate shows that payments are catching up with charges. This is evidenced by an overall collection in excess of 100 percent for FY 98.

Next, a comparison of FY 97 and FY 98 collection rates was accomplished using the accrual methodology. This comparison yielded superb results. Figure 6 shows a monthly comparison of percent collections between the two fiscal years. The overall collection rate for FY 97 is 89.4 percent. This is nearly 30 percent higher than the expected collection rate of 60 percent.

Figure 6. FY 97-98 Comparison of Percent Collections using an Accrual Methodology



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 97	88%	89%	87%	95%	90%	89%	87%	86%	88%	91%	92%	90%
FY 98	89%	91%	84%	84%	81%	76%	74%	73%	69%	58%	49%	45%

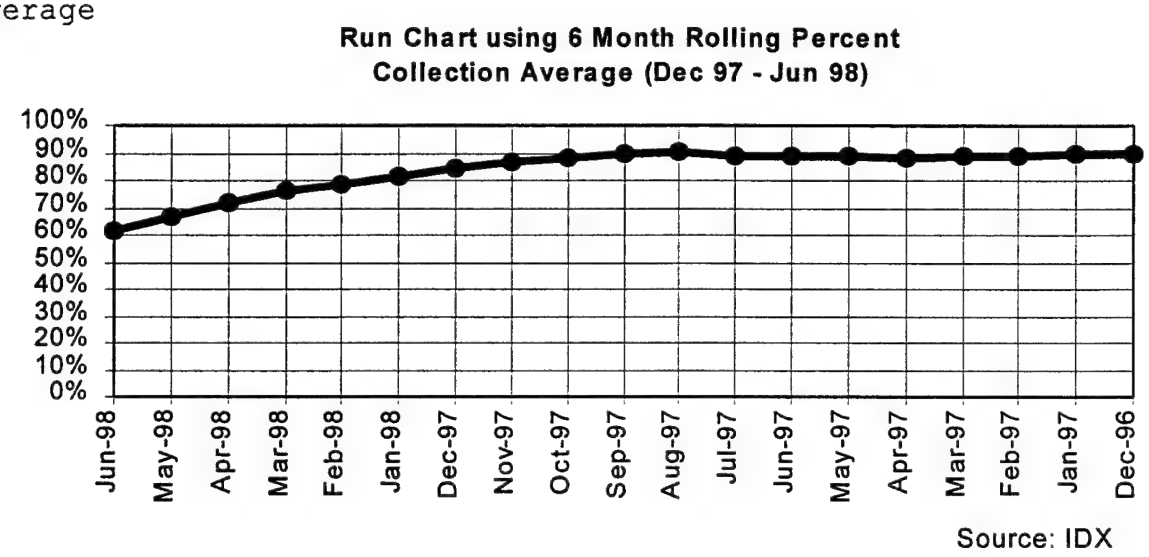
In FY 97, an accrued $7.6 million in payments have been received, as compared to $8.2 million in charges for the same period. In FY 98, an accrued $7.3 million in payments have been received, as compared to $10.5 million in charges for the same period (see Table 4).

As indicated in Figure 6, the percent collections for FY 98 are lagging behind the FY 97 numbers for the latter part of the year. This lag is expected because under an accrual methodology the latter part of FY 98 does not constitute a mature collection period. International Services anticipates the final FY 98 collection rate to exceed 90 percent. This is because as the collection period matures, and as payments are matched back to their specific charges, international patient collection rates will continue to increase. Department specific collection rates for FY 97 and FY 98 are located in Appendix B.

To minimize the effect of seasonality when studying international patient collection trends, a run chart using a six-

month rolling average was developed. The run chart shown in Figure 7 negates the effect of seasonality. Once seasonality is negated, over time there is a steady climb towards a 90 percent collection rate for international patients.

Figure 7. Run Chart of Collection Rates using a Six-month Rolling Average



In addition to the strong international patient collection trends of international patients over the last four years, a comparison between international patient collection rates and SoM domestic patient collection rates was conducted. The results are posted in Table 6.

Table 6. Comparison of SoM Patient Collection Rates using a Cash-Basis Methodology

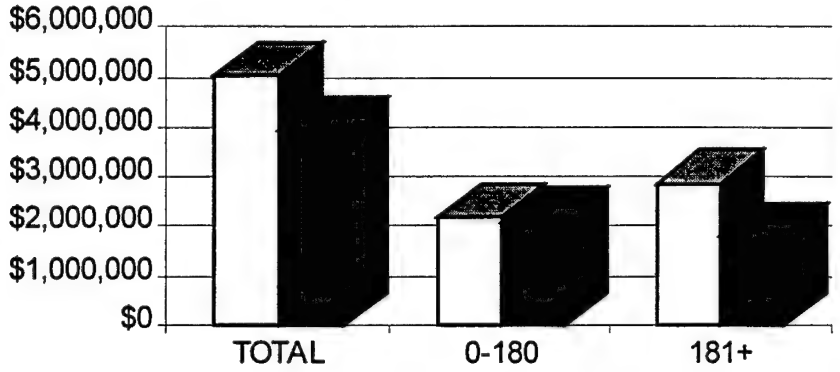
Comparison of SOM Patient Collection Rates				
Fiscal Year	International Revenues	International Patient Collection Rate	Domestic Revenues	Domestic Patient Collection Rate
FY95	$3,465,597	82%	$66,550,027	66%
FY96	$6,110,249	90%	$57,230,530	58%
FY97	$6,971,727	88%	$48,033,753	60%
FY98	$10,014,177	106%	$41,205,830	55%
Average		94%		60%

As indicated in Table 6, the annual collection rate for international patients is significantly higher than the domestic patient collection rates. In fact, the four-year cumulative average collection rate was 34 percent higher for international patients than domestic patients. This table also illustrates that as domestic revenues are diminishing, international revenues are experiencing significant growth. This trend is strongly supported by the literature review. Overall, the analysis of collection rates indicated that the collection rates for international patients are significantly higher than the collection rates for domestic patients. In addition, the collection rate for international patients climbs to ninety percent over time.

Aging of Accounts Receivables

To determine how International Services is performing their receivables management, their accounts receivables activity was examined. First, the overall FY 97-98 aging of accounts receivables for international patients were reviewed. Next, the accounts receivables were broken down into thirty-day increments. This incremental breakout allowed a better identification of International Services accounts receivables strengths and weaknesses. This comparison yielded very interesting results. Figures 8 and 9 identify International Services' management of accounts receivables.

Figure 8. FY 97-98 Aging of Accounts Receivables 180-day Comparison

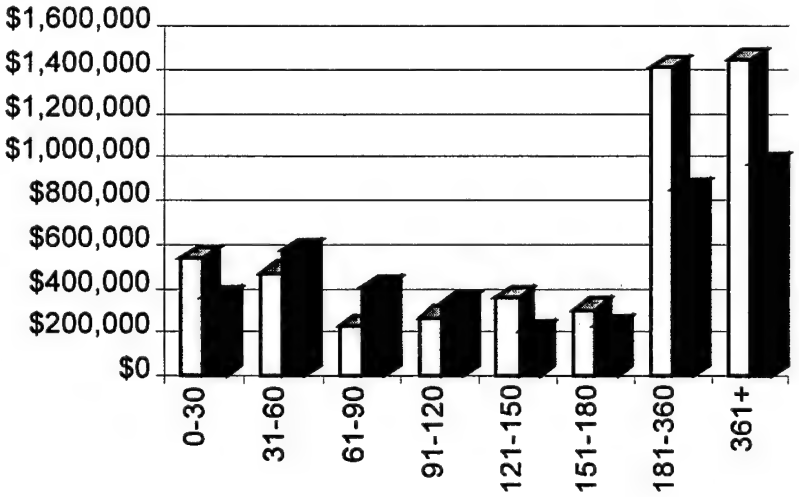


Age Cat	FY 97	FY 98
TOTAL	$5,023,478	$3,912,239
0-180	$2,163,735	$2,100,517
181+	$2,859,743	$1,811,722

Source: IDX

Overall, positive trends are evident when comparing FY 97-98. There is a $1.1 million decrease in the aging of accounts receivables. This represents a 22 percent improvement in total receivables management. However, one significant area that exhibited little improvement was the overall aging in the 0-180 day aging category. This category represents an improvement opportunity.

Figure 9. Aging of Accounts Receivables using 30-day Intervals



Age Cat	FY 97	FY 98
0-30	$541,160	$359,078
31-60	$469,935	$574,034
61-90	$223,559	$407,199
91-120	$266,090	$329,922
121-150	$359,586	$203,578
151-180	$303,405	$226,706
181-360	$1,413,165	$843,600
361+	$1,446,578	$968,122

Source: IDX

Closer examination identifies an $180K improvement in the 0-30 day window. This can be attributed to an increased emphasis

on the collection of up-front collections for international self-pay patients. In addition, the percent of accounts receivable greater than 90 days decreased by 9.7 percent between FY 97 and FY 98. Although this is an improvement, there is still ample opportunity for further reductions. The FY 98 percent of accounts receivable over 90 days was 65.7 percent. This is an area in which International Services must continue to target.

During FY 98, no international patient accounts were written off due to bad debt. International Services is carrying nearly $1 million in receivables in excess of one year old. A portion of these receivables should be either turned over to an international collection agency, or written off to bad debt. Furthermore, the investigation of accounts receivables indicates that International Services should focus on improving their credit policy to reduce the aging of their accounts receivables. These opportunities are identified in the following recommendations.

Recommendations

After conducting a rigorous analysis of the International Services Department's financial operations, it is clear that profitability, revenues, and collection rates for international patients are very strong. The examination of the management of accounts receivables identified several opportunities. The following are recommendations to remedy these shortcomings and to

further improve the financial management of international patients.

Primarily, the recommendations center on solidifying a credit policy towards international patients. Currently, there is no written credit policy regarding international patients. International patient account managers make credit decisions arbitrarily, based on what they deem appropriate. The lack of an established credit policy causes general confusion, uncontrolled discounting, little accountability, and numerous process inefficiencies resulting in lost revenues. International Services must establish a definitive credit policy in order to maximize revenues.

In order to minimize losses and to prevent undue lengthening of the collection period, it is recommended that International Services create a solid credit process. According to Gapenski (1996), there are four major controllable variables that concern a firm's credit policy; credit period, credit standards, collection policy, and discounts. These variables are discussed below.

Collection Policy

Gapenski states that the collection policy is the most important variable in a hospital's credit policy. The collection policy is measured by how an organization deals with its slow-paying accounts. International Services has an extremely lenient collection policy. This is the primary area in which

International Services must improve. In general, credit periods are not being enforced. For example, if a purchaser does not pay within the prompt pay credit period, a patient account manager may still give the health care purchaser a discount. This leniency gives embassies, foreign insurance companies, and self-pay patients a disincentive towards prompt payments because they know they will receive discounts without adhering to the terms of the credit policy.

One recommendation is restricting accounts receivables managers from extending prompt pay discount deadlines. Another shortcoming concerns the lack of a policy regarding at what point delinquent patient accounts are turned over to international collection agencies. A decision should be made regarding when these accounts should be turned over. This will increase revenues, while reducing the level of bad debt for international patients.

Credit Standards

It is difficult to collect reimbursement from payors outside of the boundaries of the United States. In order to decrease the opportunity for default, minimum credit standards for international patients must be established. The literature review suggests that in order to alleviate the difficulty associated with collecting reimbursement from international patients some hospitals require advance fee-for-service payments.

Acceptable methods of payment include bank transfers, checks, irrevocable letters of credit, and money orders.

In order to maximize the opportunity for reimbursement, it is recommended that International Services institute the following credit standards; (a) require 100 percent up-front deposits of estimated charges prior for self-pay patients, (b) require 100 percent insurance co-pay for international patients prior to rendering service, (c) ensure all foreign sponsored patients are accompanied by embassy authorization letters, and (d) require up-front payment for embassies with poor payment histories. Mandating up-front collections at the time of service will maximize cash flow, while reducing accounts receivables.

Credit Period

The credit period is the length of time buyers are given to pay for their purchases (Gapenski, 1996). Typically, this period is set at thirty days. However, international patient accounts managers have the discretion to modify these periods. Recommendations for improvement include creating a flowchart and timeline of the credit period to standardize the process. The flowchart and timeline should include the following; (a) the number of days required to prepare a bill, (b) the number of days a payor is given in order to receive a prompt pay discount, (c) the point at which second and third notices of failure to pay should be sent to payors, (d) the length of time before delinquent accounts are turned over to an international

collection agencies, and (e) the final point at which an international patient's account should be written off to bad debt.

Discounts

There is no set policy regarding discounts for foreign patients. In some cases, the prompt pay discounts for embassies, foreign insurers, and self-pay patients are as high as 20 percent. This discount directly reduces International Services' revenues. Discounting for international patients appears to be arbitrary. The following recommendations are made regarding the discounting policy; (a) eliminate prompt pay discounts for self-pay patients because self-pay patients should be paying 100 percent of estimated charges up-front, (b) require discounts in excess of five percent to be approved by senior International Services management, (c) review the policy of offering prompt pay discounts to foreign insurers, and finally (d) require managed care contracts to include an exclusion clause for foreign payors.

Further Recommendations

In addition to establishing a credit policy, the billing process should be automated. Gapenski states that a good receivables control system is important. Currently, final bills for international patients are prepared by hand. Automating this process will improve the speed and efficiency of billing international patients, while reducing error rates. In-turn this

will reduce the front-end time it takes to bill international patients.

Another benefit of automating the billing systems is that it will allow international patient accounts managers to more accurately track international patient accounts. If the above recommendations are instituted, International Services should note improvements in the management of accounts receivables. These improvements will result in higher revenue, and greater profit margins for the SoM.

Conclusion

In this era of budget cuts, shrinking profit margins, and fiscal responsibility, health care organizations are being forced to explore new avenues in which to generate revenues. International patients represent one such opportunity because they are not affected by the constraints of managed care. These patients represent an opportunity for hospitals to receive full reimbursement for medical care rendered.

The purpose of this study was to determine the impact of international patients on the SoM. This was accomplished by conducting a financial trend analysis of gross revenues, collection rates, and the aging of accounts receivables for international patients. Two specific goals were identified. The primary goal was to identify effort international patients on the SoM. The secondary goal was to provide recommendations regarding

how International Services could improve their receivables management to better maximize international patient revenues.

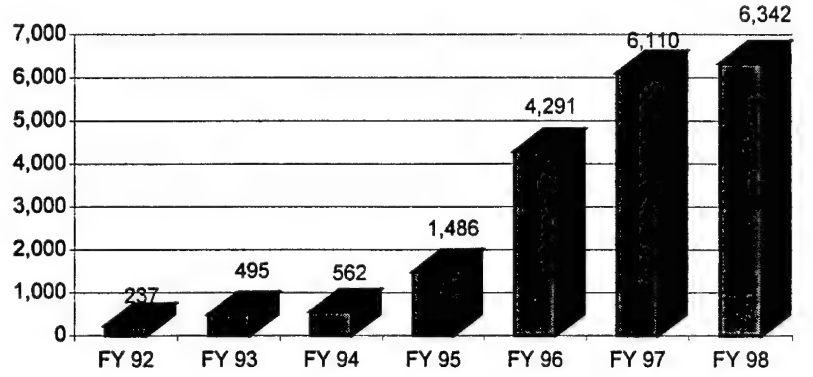
The results of the financial analysis regarding profitability, revenues, and collection rates were overwhelming. It is evident that the SoM is benefiting from the efforts of the International Services Department. In terms of profitability, the four-year cumulative return for international patients was 1602 percent. Revenues between FY 95 and FY 98 increased 189 percent or nearly $2.2 million annually (see Figure 1). In addition, collection rates were very strong. International Services expects to exceed a 90 percent collection rate for FY 98 charges (see Figure 5). This will result in $17 million in cumulative revenues for FY 97-98.

An examination of the aging of accounts receivables, identified a 22 percent improvement in total accounts receivables outstanding between FY 97 and FY 98 (see Figure 7). This is a positive trend. However, further examination of receivables management showed a lack of a solid credit policy. Recommendations were made to improve this financial area. If International Services develops a strong credit policy to rectify deficiencies in their receivables management, they will realize significant improvements. These improvements will accelerate international patient revenues, thus improving net cash flow to the SoM.

In summary, it is evident that international patients positively contribute to the SoM. The benefits of international patients are apparent in both the financial analysis, as well as in the literature reviewed. As the revenue potential in the domestic health care market continues to diminish, the international patient market represents a tremendous opportunity to increase revenues. For these reasons, the SoM should fully support endeavors to bring international patients to the Johns Hopkins Hospital.

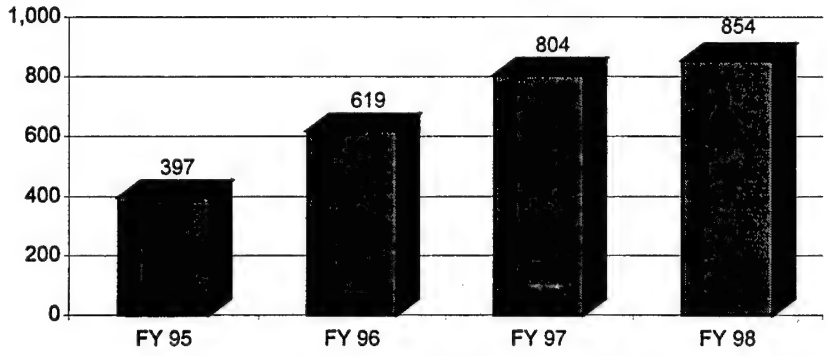
Appendix A

JHH International Patient Growth



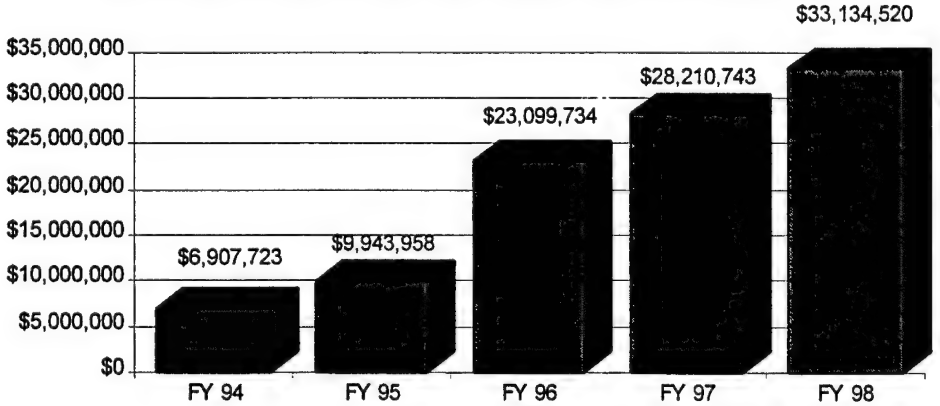
Source: JHH Meridian International Patient Tracking System

JHH International Patient Admissions



Source: JHH Meridian International Patient Tracking System

JHH International Patient Gross Revenues



Source: JHH IDX and Keane Financial Information Systems

Appendix B

FY 97 Department Specific International Patient Collection Rates			
Department	Charges	Payments	Collection Rate
Anesthesiology	$1,037,454	$955,300	92.1%
Cardiology	$440,152	$384,246	87.3%
Dermatology	$71,650	$63,208	88.2%
ED	$15,239	$12,507	82.1%
GYN/OB	$179,347	$159,182	88.8%
Medicine	$519,911	$451,473	86.8%
Neurology	$332,959	$291,440	87.5%
Neurosurgery	$456,157	$419,369	91.9%
Oncology	$509,788	$445,556	87.4%
Ophthalmology	$1,005,491	$889,259	88.4%
Orthopedics	$703,631	$658,595	93.6%
Otolaryngology	$510,266	$405,851	79.5%
Pathology	$230,428	$208,710	90.6%
Pediatrics	$236,662	$200,854	84.9%
Radiology	$780,500	$703,717	90.2%
Rehab Medicine	$42,413	$36,937	87.1%
Surgery (general)	$817,053	$737,526	90.3%
Urology	$279,449	$274,843	98.4%

FY 98 Department Specific International Patient Collection Rates			
Department	Charges	Payments	Collection Rate
Anesthesiology	$1,208,826	$895,611	74.1%
Cardiology	$719,110	$550,820	76.6%
Dermatology	$74,907	$51,921	69.3%
ED	$17,964	$8,364	46.6%
GYN/OB	$204,684	$128,747	62.9%
Medicine	$663,522	$519,016	78.2%
Neurology	$364,183	$268,979	73.9%
Neurosurgery	$683,290	$411,230	60.2%
Oncology	$790,247	$561,431	71.0%
Ophthalmology	$1,210,603	$934,649	77.2%
Orthopedics	$744,373	$478,705	64.3%
Otolaryngology	$456,022	$287,880	63.1%
Pathology	$316,343	$211,664	66.9%
Pediatrics	$225,727	$168,270	74.5%
Radiology	$1,110,202	$791,591	71.3%
Rehab Medicine	$39,817	$28,608	71.8%
Surgery (general)	$1,219,139	$945,001	77.5%
Urology	$396,367	$332,885	84.0%

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